CLASSIFICATION SECRET/SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

COUNTRY USSR/Germany (Soviet Zone)

SUBJECT Miscellaneous Information on Soviet Ordnance

PLACE ACQUIRED

DATE ACQUIRED

DATE OF INFORMATION

NO. OF ENCLS. 1 (LISTED BELOW) 50X1

SUPPLEMENT TO REPORT NO. 50X1

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THIS IS UNEVALUATED INFORMATION 50X1

The AZP-47

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1. in June 1951 50X1
a new aiming device, the AZP-47 (Avtomaticheskaya Zenitnaya Pritsel - Automatic AAA sight, model 1947), previously used 50X1
only in the USSR, had been brought into Germany. 50X1

it is far better than the PUAZO-3 (Pribor Upravleniya Artileriskym Zenitmym Ognyom - AAA Director) or the AZP-39 (Automatic AAA sight, model 1939) in that the controls are arranged for more expeditious handling and the gunner can make slight corrections by observing the shellbursts. 50X1 50X1

2. 50X1

The speed computer, distance computer and computer of angle of dive and pitch are the automatic features of the AZP-47.

3. 50X1

The speed computer is changed to compute data on airplane speed up to 100 km an hour, the AZP-39 could not compute data on planes above 500-600 km an hour. The AZP-47 enables the gunner himself to make adjustments for elevation and deflection, thus eliminating the work of a gun crew man who worked on deflection adjustment when the AZP-39 is used. 50X1

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STATE	X	NAVY	X	AEC	X	DISTRIBUTION	
ARMY		AEC	X	FBI	X		

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4. [redacted]

The AZP-47 is a direct fire system and is not director controlled. The sight itself computes all data by feeding them into the computers for speed, distance, and angle of pitch and dive.

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5. [redacted]

AZP-47 consists of a collimator with two 6X magnifying lenses and has no telescope. /See sketch 3, Enclosure A, for sketch of how Source believes the AZP-47 to look./

6. [redacted]

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7. [redacted]

Five small lamps powered by a battery are hung on the sights. /See sketch 2, Enclosure A./

8. How are varying conditions of light compensated for? Through use of filters or rheostat?

Filters (dark colored glass) are used to compensate for varying conditions of light.

9. How are leads accomplished? A mechanism geared to the sight or estimated by observation and through the use of reticles in sights? If open sights - type and description.

Lead is computed automatically by the sight by a mechanism geared to the sight.

The The 57-mm AAA Gun

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10. [redacted]

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following data about the new 57-mm AAA gun. [redacted]

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(a) The new gun has a much longer barrel than the present 57-mm AT gun and is equipped with a muzzle brake.

(b) Fixed on top of the barrel is a 12.7-mm AA MG which is synchronized to fire upon the same target as the gun. It can be fired independently, or simultaneously with the 57-mm AA gun.

(c) Only one gunner (sighting device operator) is required for the gun and there is only a single seat for a gunner, whereas present AA guns require two gunners and have two seats for them.

(d) The mount for the gun is approximately the same as that of the 37-mm AA guns, model 1939.

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[redacted]

(e) Ammunition feed is from a clip of ten rounds (present 37-mm clips holds five rounds) in which the rounds are staggered /as in the clip for the US .30 caliber carbine/.

(f) The new gun has a traverse of 360 degrees. Maximum elevation from the horizontal is 85 degrees and the maximum depression from the horizontal is 10 degrees.

(g) Muzzle velocity of the new gun (using tracer HE projectiles) is 1200 meters per second. Present 37-mm AA guns have a velocity of about 900 meters per second and 85-mm AA guns have a velocity of about 950 meters per second.

(h) The cyclic rate of fire of the new gun is higher than that of present guns but [redacted] could not give [redacted] the exact cyclic rate. The present actual cyclic rate of 37-mm AA guns is 60-80 rounds per minute whereas the factory-rated cyclic rate is 160-180 rounds per minute. [redacted] the actual rate of fire of the new gun will not exceed 100 rounds per minute as technical regulations require a change of barrels after firing each 100 rounds. 50X1 50X1 50X1

(i) The new 57-mm AA gun can also be used as an AT gun.

(j) The new gun is towed by the GAZ-53 (2½ ton) prime mover. 50X1

(k) [redacted] the new gun uses tracer HE, AP, and fragmentation rounds. [redacted] 50X1

11. [redacted] 50X1

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[redacted] the new 57-mm AA gun is controlled by radar, [redacted] 50X1

If radar controlled, all guns of a battery fire together. They can fire separately if direct sights and not radar is used. 50X1 50X1 50X1

[redacted] loading through top of receiver as in model 1939 37-mm gun [redacted]

[redacted]

it is used to supplement the gun's fire power, because like all AA guns, it uses tracer rounds and does not need guide tracers of an AA MG. 50X1 50X1

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[redacted]

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[redacted] barrel changing on the new 57-mm gun. On the 1939 37-mm AA gun it takes three men to change the barrel and the operation lasts about eight minutes. The locking screw on the breech must be pulled out, the barrel is turned 90 degrees, removed, a new barrel is put in and locked in place by the breech locking screw.

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12. [redacted]

13.

(d) For reasons of secrecy, the Soviet troops in the Soviet Zone of Germany have no new weapons. They use old lend-lease equipment and obsolete weapons whereas, the Soviet Army in the USSR has all new weapons.

Miscellaneous Ordnance

14.

With the 37-mm gun, separate range finders, similar to the German type, are used.

PUAZO-3 director is used with the Soviet 85-mm AA gun.

105-mm AA guns are used for fixed defenses. not know whether or not these are captured German pieces put into use by the Soviets. there are 90-mm and 100-mm AA guns.

the nine kilometer range of the 85-mm AA gun is sufficient for AA purposes, therefore larger caliber AA guns are not necessary. Further, speed, all important in AA fire, would be lost in handling heavy rounds.

Eleven men are required to operate a PUAZO-3 and its ballistic computer.

the 85-mm AA gun can be adapted to radar control but at present height finders are used instead of radar.

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very few troops have had training in radar. It is not in general use in the field. 50X1

the Soviet Navy had various types of radar. Radar is quite new to the Russians and most of the activity in this field has centered around developing and testing radar equipment of Soviet design. 50X1

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in the opinion of most AAA officer, AA MGs are obsolete because they are not made to fire on planes of modern speed. 50X1

short rounds and breech malfunctions occur frequently. 50X1

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The Tokarev Model 1940 rifle did not function well. The least amount of dirt resulted in jamming. Malfunctions were also caused by oil inside the gun freezing at low temperatures. the Tokarev Model 1940 was replaced by the PPSh 43 and the Mosin-Nagant Model 1938 carbine as well as by the PPSh 41.

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Enclosure (A): Three Sketches as follows:

Sketch 1.... Mobile Type Early Warning Radar Antenna
Sketch 2.... Location of Lamps for Night Illumination
50X1 Sketch 3.... Conception of the Collimator and Reticle of the AZP-47

ENCLOSURE (A)

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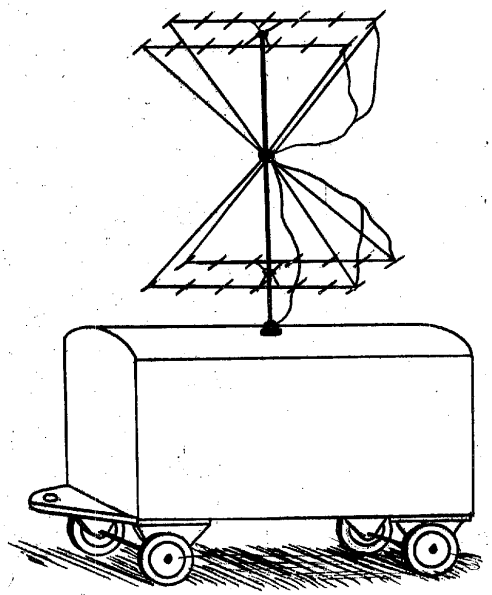
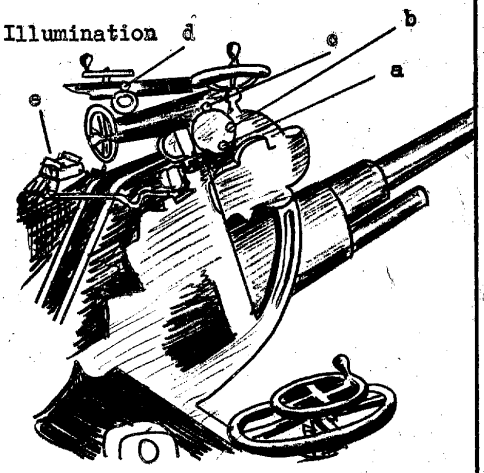
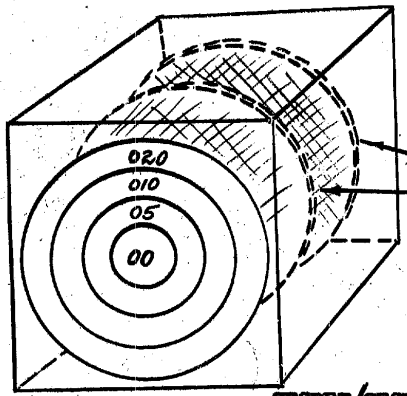
Sketch 1 - Mobile Type Early Warning Radar Antenna



Sketch 2 - Location of Lamps for Night Illumination

a-Collimator
b-Speed Computor
c-Distance Computor
d-Dive Pitch Angle Computor
e-Collimator





Sketch 3 - [redacted] Conception of the collimator and reticle of the AZP-47

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6X magnifying lense

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